

between a single one of the readout elements 27 and the photocathode layer 18 are schematically indicated by reference numeral 51 in Fig. 2. The avalanche regions 53 are formed in a region between and around the edges of the avalanche cathode 21 which are facing each other, and between the avalanche cathode 21 and the avalanche anode 27, where, during use, a concentrated electric field will occur due to the applied voltages.—

Please replace the paragraph beginning on page 9, line 17, with the following rewritten paragraph:

-- In operation, the detector apparatus 9 of Fig. 1 is positioned in the path of the radiation desired to be detected. Rays of incident radiation emanating directly from the subject under examination will travel in a path so as to pass through collimator 11 and enter photocathode layer 18, whereas unwanted radiation scattered from the subject under examination towards the detection device will typically travel at some angle to the plane of the collimator and thus will not be able to traverse collimator 11. --

Please replace the paragraph beginning on page 10, line 10, with the following rewritten paragraph:

-- The accelerated electrons will interact with other substance (e.g. atoms, molecules etc.) in section 13 and regions 53, causing electron-ion pairs to be produced. Those produced electrons will also be accelerated in the field, and will interact repetitively with new material, causing further electron-ion pairs to be produced. This process continues during the travel of the electrons in the avalanche region towards anode arrangement 27, 29 located at the bottom of the avalanche region, and in such way electron avalanches are formed.--